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MURRAYA KOENIGII (MITHA NEEM) RUTACEAE: OVERVIEW

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ABSTRACT

Murraya koenigii (Rutaceae) commonly known as “Curry leaves”. Curry leaves have many pharmacological activities such as anticonvulsant, antitumor, anti-inflammatory, diuretic, anti-oxidant anti-viral and activities. The leaves are used traditionally as spice. The aim of the present review study is to update information about classification, botanical description, traditionally use and pharmacological studies of *Murraya koenigii*.

KEYWORDS: Medicinal Plant, Traditionally, Antibacterial, Antioxidant

INTRODUCTION

Murraya koenigii (Rutaceae) commonly known as “Curry Patta” (Hindi) is widely used as a spice and condiment in India and other tropical countries. Various parts of *Murraya koenigii* have been used in traditional or folk medicine for the treatment of rheumatism, traumatic injury and snake bite and it has been reported to have antioxidant, anti-diabetic and anti-dysenteric activities.^[1] The *Murraya* species has richest source of carbazole alkaloids. Further, Carbazole alkaloids has been reported for their various pharmacological activities such as anticonvulsant, antitumor, anti-inflammatory, diuretic, anti-viral and activities.^[2] The leaves of the plants are full of antioxidants, namely, tocopherol, β-carotene, and lutein, and possess antioxidative and anti-lipid peroxidative activities, providing protection against oxidative stress.^[3]

TAXONOMY

Kingdom	- Plantae
Sub-kingdom	- Tracheobionta
Superdivision	- Spermatophyta
Division	- Magnoliophyta
Class	- Magnoliopsida
Subclass	- Rosidae
Order	- Sapindales
Family	- Rutaceae
Genus	- Murraya
Species	- <i>Murraya koenigii</i>

VERNACULAR NAME

English	- Curry leaves
Hindi	- Karipatta, Mitha neem
Sanskrit	- Girinimba
Gujarathi	- Mitho limado
Tamil	- Kariveppilai

BOTANICAL DESCRIPTION

The *M. koenigii* is having grey color bark, longitudinal striations on it and beneath it white bark is present. Leaves are bipinnately compound, 15-30 cm long each bearing 11-25 leaflets alternate on rachis, 2.5-3.5 cm long ovate lanceolate with an oblique base. Margins irregularly crenate, petioles 2-3 mm long, flowers are bisexual, white, funnel shaped sweetly scented, stalked, complete, ebracteate, regular with average diameter of fully opened flower being in average 1.12 cm inflorescence, terminal cymes each bearing 60-90 flowers. Fruits are ovoid to subglobose, wrinkled or rough with glands. It is having the size of 2.5 cm long and 0.3 cm in diameter and gets purplish black when ripe. Fruits are generally biseeded. Seeds generally occur in spinach green color, 11 mm long, 8 mm in diameter and weighs up to 445 mg.^[4]

TRADITIONAL USES

The plant has been in use since the ancient times in traditional medicine systems in India; the useful parts of the plant included leaves, root, bark, and fruits. Fresh leaves, dried leaf powder, and essential oil are widely used for flavouring soups, curries, fish and meat dishes, eggs dishes, traditional curry powder blends, seasoning and ready to use other food preparations. The essential oil is also utilized by soap and cosmetic aromatherapy industry.^[5] The branches of *Murrra koenigii* are used to strengthen gums, popularly used to clean teeth as datum.^[6] It has also been used as an antiperiodic and many a time the powdered dry leaf, mixed with honey and juice of betel nut, is recommended in the Ayurvedic system of medicine.^[7] Kong et al. reported that the roots of *M. koenigii* are used as purgative and stimulant as well as in body ache, whereas the bark is used in the treatment of snakebite.^[8] Curry leaves are used in

dysentery and checking vomiting and applied to bruises and eruption while bark and roots are utilized as

stimulants and applied to cure skin eruption and to bite of poisonous animals.^[9]

PHARMACOLOGICAL ACTIVITIES

Table 2: Pharmacological activities done on *Murraya koenigii* plant.^[10]

S.No.	Pharmacological activity	Plant part	Extract
1	Anti-inflammatory	Leaf	Ethanol, Petroleumether, Chloroform, Methanol
2.	Anti-amnesic	Leaf	Petroleum ether
3	Hypocholesterolemic	Leaf	Ethanol
4.	Memory enhancer	Leaf	Petroleum ether
5.	Anti-helminthic	Leaf	Alcoholic
6.	Anti-bacterial	Bark, Leaf	Petroleum ether , Alcohol
7.	Anti-cancer	Stem, Bark	Petroleum ether
8.	Anti-diabetic	Whole plant	Aqueous, methanol
9.	Antidiarrhoeal	Seeds	n-hexane
10	Anti-oxidant	Leaf	Methanol and Aqueous
11	Cardiovascular	Leaf	Aqueous
12	Anti-tumor	Leaf	Petroleum ether
13	Anti-ulcer	Leaf	Aqueous
14	Cytotoxicity	Roots, stem	Aqueous
15	Wound healing activity	Leaf	Methanol

CONCLUSION

Medicinal plants or their bioactive compounds have been utilized by developing countries for primary and traditional healthcare system since very long period of time. herbal drugs are extensively used to treat various diseases due to their effectiveness, minimal side effects and relatively low cost. An ethnobotanical approach represents an effective method which may improve the outcomes of phytochemical research. The vast number of edible plants used as foods and medicines by the Indian population creates opportunities for the discovery of novel physiologically active compounds.

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